

THE CLAIMS DEFINING THE INVENTION ARE AS FOLLOWS:

1. (new) An evaporative cooler having a housing adapted to be installed within the roof space of a pitched roof, said housing having an air inlet which is inclined in such a manner as to extend substantially parallel to the plane of the pitched roof when installed, one or more evaporative pads mounted in the housing and defining an air-permeable cooling means associated with the inlet, means for supplying water to the or each pad, and a fan for drawing external air into the housing via the air-permeable cooling means and for discharging the air thereby cooled via an outlet of the housing, wherein the housing is so configured that when installed within the roof space the inclined air inlet is closely adjacent the external surface of the pitched roof.
2. (new) An evaporative cooler having a housing adapted to be installed within the roof space of a pitched roof, said housing having an air inlet associated with one or more evaporative pads defining an air-permeable cooling means, means for supplying water to the or each pad, and a fan for drawing external air into the housing via the air-permeable cooling means and for discharging the air thereby cooled via an outlet from the housing, wherein the housing is configured so that the inlet is inclined in such a manner as to extend substantially parallel to the plane of the pitched roof with the inlet lying closely adjacent to the external surface of the roof to avoid any substantial projection of the housing beyond the external surface of the roof, and the air-permeable cooling means is mounted within the housing so as to be positioned substantially wholly beneath the level of the external surface of the roof.
3. (new) An evaporative cooler having a housing adapted to be installed within the roof space of a pitched roof, said housing having an air inlet associated with one or more evaporative pads defining an air-permeable cooling means, the inlet being inclined so as to extend substantially parallel to, and in close proximity to, the plane of the roof, means for supplying water to the or each pad, and a fan for drawing external air into the housing via the air-permeable cooling means and for discharging the air thereby cooled via an outlet,

- 14 -

wherein the housing is so configured that when the unit is installed there is no substantial projection of the air-permeable cooling means beyond the external surface of the pitched roof.

4. (new) An evaporative cooler according to any one of claims 1 to 3, wherein the air-permeable cooling means formed by the or each pad is substantially planar in form and is mounted within the housing in an inclined configuration so as to lie substantially parallel to the inlet.

5. (amended) An evaporative cooler according to claim 4, wherein the water supply means includes spray and/or drip emitters configured to discharge water onto an upper outwardly-facing surface of the or each pad defining the air-permeable cooling means.

6. (new) An evaporative cooler according to any one of claims 1 to 3, wherein the pads defining the air-permeable cooling means are arranged within the housing beneath the inlet in an angular array, one inclined relative to another, to define a zig-zag configuration.

7. (new) An evaporative cooler according to claim 6, wherein the inclination of the individual pads within the zig-zag configuration is such that water supplied by the water supply means to an upper edge of each pad will flow downwardly through the pad in the length direction thereof.

8. (new) A cooler according to any one of claims 1 to 7, wherein the means for supplying water to the air-permeable cooling means comprises a reservoir at the base of the housing, and the base of the housing is so configured that surplus water discharged from the or each pad into the interior of the housing is directed into the reservoir for re-use.

9. (amended) An evaporative cooler according to any one of claims 1 to 8, wherein the housing has an inclined outer wall in which the inlet is formed, the outer wall including flashing for cooperation with the roof.

- 15 -

10. (amended) An evaporative cooler according to claim 9, wherein the flashing is integrally formed with the housing.

11. (amended) An evaporative cooler according to claim 9 or claim 10, wherein the flashing includes a rain water diverter for diverting water flowing down the roof from above the cooler to substantially prevent such flowing water from flowing into the interior of the housing via the air-permeable cooling means.

12. (amended) An evaporative cooler according to any one of claims 1 to 11, having within the interior of the housing, means for removing water droplets which may be entrained within the flow of cooled air.

13. (amended) An evaporative cooler according to claim 12, wherein the droplet removal means comprises an array of vanes positioned within the flow path of the cooled air.

14. (amended) An evaporative cooler according to claim 12, wherein the droplet removal means comprises an air-permeable pad positioned within the flow path of the cooled air.

15. (amended) An evaporative cooler according to any one of claims 1 to 14, wherein the air-permeable cooling means is mounted to an upper part of the housing including the inlet, said upper housing part being movable prior to installation of the cooler relative to a lower housing part which includes the outlet, the movement between the upper housing part and lower housing part enabling the housing to be adjusted to suit the pitch of the roof into which the cooler is being installed.

16. (amended) An evaporative cooler according to claim 15, wherein the upper housing part is pivotally attached to the lower housing part to enable the upper housing part to be swung relative to the lower housing part to adjust the angle of inclination of the upper housing part to suit the pitch of the roof.

- 16 -

17. (amended) An evaporative cooler according to claim 15 or claim 16, wherein the upper and lower housing parts have walls which lie in overlapping relationship throughout the range of movement of the upper housing part relative to the lower housing part.

18. (amended) An evaporative cooler according to claim 17, wherein the upper housing part is sealed relative to the lower housing part by flexible sheet material which permits the relative movement between the housing parts.

19. (amended) An evaporative cooler according to claim 18, wherein the flexible sheet material is of concertina like form.

20. (amended) An evaporative cooler according to any one of claims 1 to 19, wherein the housing carries above the air-permeable cooling means a structure to prevent a person on the roof from stepping onto the air-permeable cooling means and falling into the interior of the housing.

21. (amended) An evaporative cooler installation comprising a cooler housing mounted within the roof space of a pitched roof with the housing inlet, which is associated with evaporative cooling pads, being inclined to lie substantially parallel to the plane of the roof in close proximity thereto.

22. (new) An evaporative cooler installation comprising a cooler housing mounted substantially wholly within the roof space of a pitched roof with the housing inlet for entry of external air being inclined so as to lie substantially in the plane of the pitched roof, one or more evaporative cooling pads being mounted within the housing substantially wholly beneath the plane of the roof such that external air flow is drawn into the interior of the housing via the inlet and evaporative cooling pad or pads for discharge from an outlet of the housing.

- 17 -

23. (amended) An evaporative cooler installation mounted within the roof space of a pitched roof of a building, said installation including an evaporative cooler having a cooler housing mounted between rafters of the pitched roof, said housing being substantially wholly within the roof space and carrying a fan for drawing external air into the housing via one or more evaporative pads defining an air-permeable cooling means and for discharging the air thereby cooled via an outlet from the housing, and said housing also carrying a water reservoir and a pump for feeding water from the reservoir to the or each pad and forming means for supplying water to the or each pad, wherein the housing mounts the air-permeable cooling means such that there is substantially no projection of the air-permeable cooling means beyond the external surface of the roof.

24. (new) An installation according to any one of claims 21 to 23, wherein the pads are arranged within the housing in an angular array, one inclined relative to another, to define a zig-zag configuration.

25. (new) An installation according to claim 24, wherein the inclination of the individual pads within the zig-zag configuration is such that water supplied by the water supply means to an upper edge of each pad will flow downwardly through the pad in the length direction thereof.

26. (new) An installation according to any one of claims 21 to 25 having an air permeable pad within the interior of the housing downstream of the cooling pad or pads to remove water droplets which may be entrained within the flow of cooled air.

27. (new) An evaporative cooler installation comprising a cooler housing mounted substantially wholly within the roof space of a pitched roof, the housing having an inclined air inlet positioned close to the external surface of the roof, the inlet being upwardly facing, and one or more evaporative cooling pads mounted in the housing adjacent the inlet to cool air drawn into the housing via the inlet for discharge of cooled air from an outlet of the housing.

- 18 -

28. (new) An evaporative cooler installation comprising a cooler housing having opposed substantially parallel side walls and an inclined air inlet at an upper side of the housing, said inlet being rectangular and facing upwardly and said inlet being positioned close to the external surface of the roof, and one or more evaporative cooling pads mounted between the side walls adjacent the inlet to cool air drawn into the housing via the inlet for discharge of cooled air from an outlet of the housing.